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U. S. DEPARTMENT OF AGRICULTURE

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A A SHIPPING CONTAINER FOR ADULT INSECTS

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A shipping container for insects was devised and tested in 1944 in large-scale shipments of parasites of the European corn borer (Pyrausta nubilalis (Hbn.)). This container is similar to those previously used on this and other projects,<sup>1/</sup> but includes several modifications which seem worth reporting.

This improved shipping container is designed to be used in conjunction with a vacuum type of insect collector, such as a modified hair drier, similar to those now commonly in use in various entomological laboratories. The insects are drawn into the container when the air stream passes through a glass tube which is held in a No. 9 rubber stopper placed in the cover opening.

The container is a standard, pint-size ice-cream carton, 3 3/8 inches in diameter and 3 1/4 inches deep (inside dimensions). Cartons with this diameter and a selection of different depths are available commercially.

A hole 1 5/8 inches in diameter is punched in the center of the top and bottom of the carton. If many containers are to be made, a simple machine punch similar to that shown in figure 1 can be constructed, but a hand punch is entirely satisfactory when only a few are to be made. However, it is essential that the opening in the cover be of the exact size specified. The containers used have a double bottom. After the hole has been punched in the bottom of the carton, the inner bottom liner, now in the form of a ring 7/8 inches wide, can easily be removed. A piece of cheesecloth is attached to this ring by means of hot wax or shellac and allowed to dry. The carton is then dipped in very hot wax and the cloth-covered bottom insert quickly replaced with the cloth side down. The hot wax will hold the inner liner firmly to the bottom and seal the crack around the edge.

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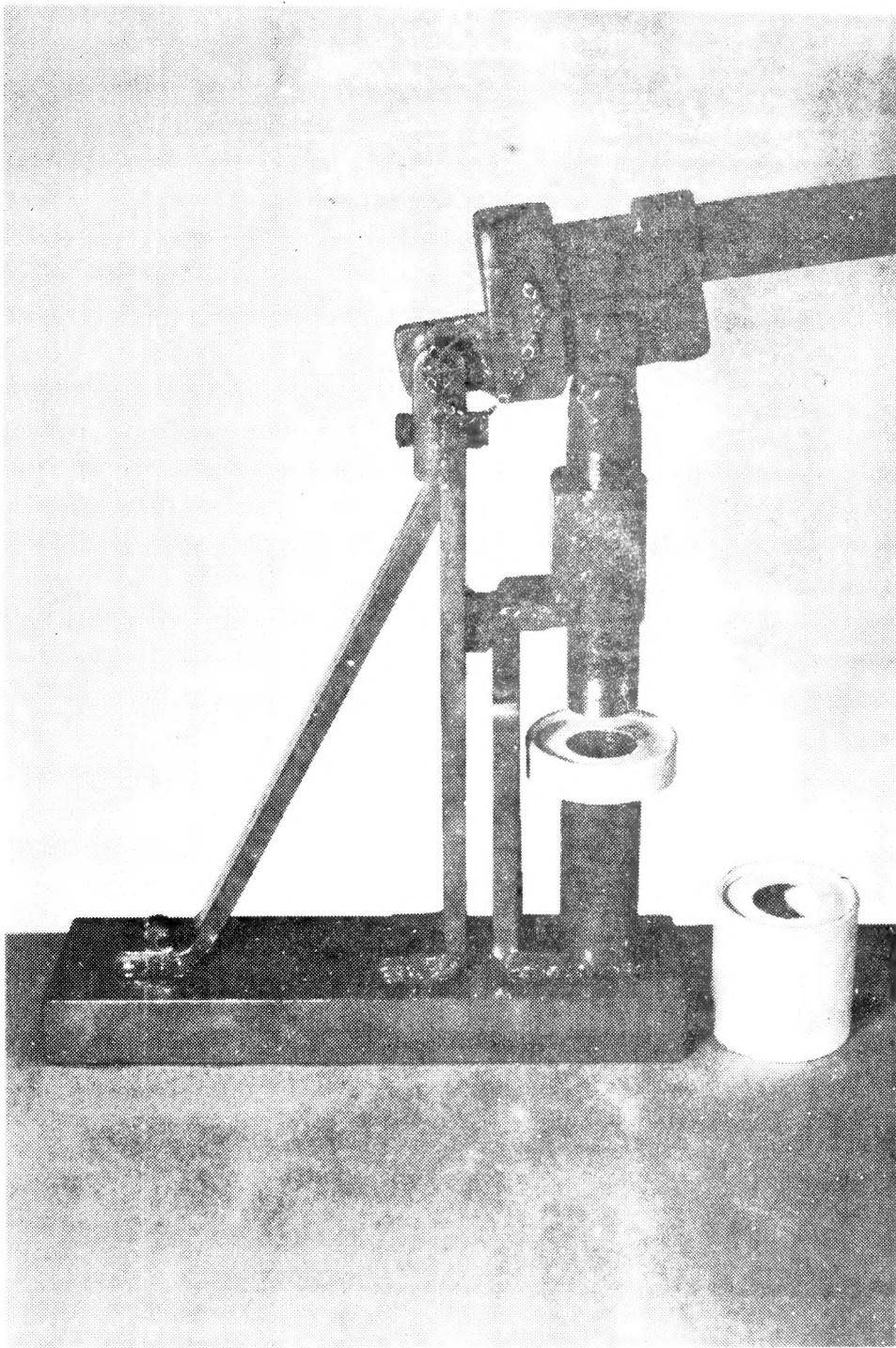
<sup>1/</sup> Garman, P., and Brigham, W. T. Studies on parasites of the oriental fruit moth, II. Macrocentrus ancylovorus. Conn. (State) Agr. Expt. Sta. Bul. 356, 116 pp. 1933.

The closure used in the cover is a milk-bottle cap with a flanged edge approximately 1/2 inch wide. The cap fits in the opening very snugly, and no seal is needed to hold it in place. It does not use up any extra space when the containers are packed for shipment. Caps can be purchased in various colors. In parasite work with the corn borer different-colored caps are used on containers for different species of parasites, for convenience when more than one species is shipped in the same consignment. The date, species, number of specimens, or other information can be written on the flat center portion of the cap, or the caps can be purchased with suitable information printed on them.

When in use, a small amount of excelsior is placed in the container to provide a footing for the adult insects. Consignments are dispatched in iced shipping boxes, which keep the adults inactive so that no provision for food en route is necessary.

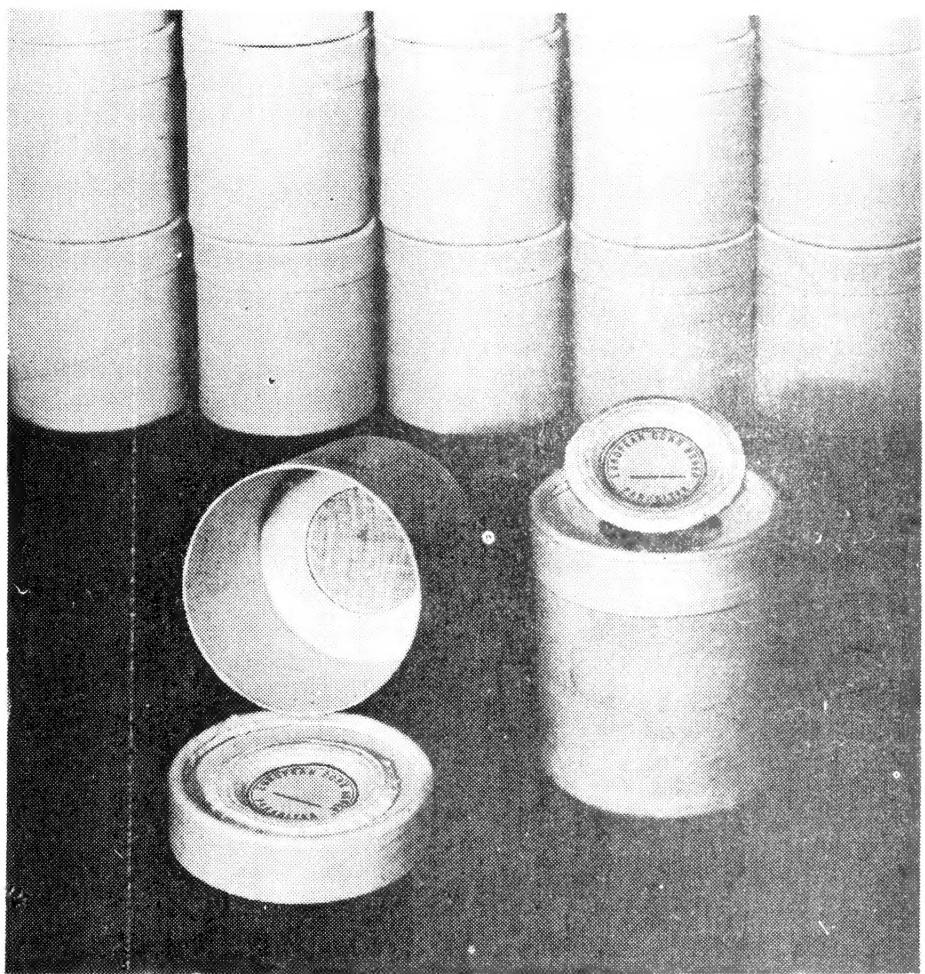
The fact that these containers are very light is an advantage, especially when shipments are made by air express. Completed containers are shown in figure 2.

The total finished cost of these containers, with caps, at present (1945) prices is less than 5 cents each.



**Figure 1.—**Machine punch used in preparation of shipping containers for insects.





**Figure 2.--Completed containers for shipping insects.**

